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The Cartographic Application of ERTS/RBV Imagery in Polar Regions

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E7.3 10501

CR-13/536

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1 March 1973

Type I Progress Report for Period 1 January 1973 - 28 February 1973

(E73-10501) THE CARTOGRAPHIC APPLICATION
OF ERTS/RBV IMAGERY IN POLAR REGIONS
Progress Report, 1 Jan. - 28 Feb. 1973
(Geological Survey) 4 p HC \$3.00

N73-21337

Unclas

CSCL 08B G3/13 00501

Prepared for:

Goddard Space Flight Center
Greenbelt, Maryland 20771

Publication Authorized by the Director, U.S. Geological Survey

Type I Progress Report
ERTS-A

- a. Title: The Cartographic Application of ERTS/RBV Imagery
in Polar Regions

ERTS-A Proposal No.: 149

- b. GSFC ID No. of P.I.: IN 391

- c. Statement and explanation of any problems that are impeding the progress of the investigation: Due to the arctic winter, ERTS-1 imagery has not been obtained over the arctic areas of investigation. The delay in obtaining the first imagery over the Antarctic has resulted in the loss of about 25% of our data time window. Existing ERTS-1 imagery over the arctic and antarctic regions remains sparse and does not cover sufficient area to complete any single cartographic product.

Indexing the imagery remains a problem with no suitable base or orbital tracking chart available for the polar Regions.

ERTS imagery is not available to date over the doppler field test areas with regards to experiment #8, "Doppler Position System." The imagery is needed for photoidentification of the doppler positions established during the field test.

Imagery received to date over the Antarctic has in the majority of cases been only one or two frames along a single orbit pass. This is insufficient to provide the following:

- (1) coverage over block areas to support compilation
of the proposed cartographic products.

(2) continuity which would aid the analysis of any
one feature, i.e., ice front, glacier, and shore line

(3) study of investigations requiring repetitive coverage,

- d. Discussion of the accomplishments during the reporting period and those planned for the next reporting period:

Work is progressing on the indexing of the total volume of film and prints of the MSS imagery received over the polar regions. Preparations are underway to develop a useable base to index antarctic imagery. Data reduction is nearing completion for experiment #8, "Doppler Position System." Analysis of ERTS-1 imagery once available will be directed toward photoidentification of the doppler positions. Compilation of cartographic products will begin over selected areas of investigation once sufficient imagery becomes available. In the interim, scientific and cartographic analysis will be conducted to detect significant changes to existing maps and to detect natural phenomenon.

- e. Discussion of significant scientific results and their relationship to practical applications or operational problems including estimates of the cost benefits of any significant results (To be prepared in scientific abstract form of 200 words or less): N/A

- f. A listing of published articles, and/or papers, pre-prints, in-house reports, abstracts of talks, that were released during the reporting period: N/A

g. Recommendation concerning practical changes in operations, additional investigative effort, correlation of effort and/or results as related to a maximum utilization of the ERTS system: N/A

h. A listing by date of any changes in Standing Order Forms:

N/A

i. ERTS Image Descriptor forms: N/A

j. Listing by date of any changed Data Request forms submitted to Goddard Space Flight Center/NDPF during the reporting period: N/A

k. Status of Data Collection Platforms (if Applicable):

N/A